

# INTERNATIONAL RESEARCH PARTNERSHIPS GRANT (IRPG)

## EARMA conference 2017

Drew Knight – Director, Global Research and Strategic Alliances, Office of  
Research/Waterloo International

# INTRODUCTION TO THE UNIVERSITY OF WATERLOO



## HISTORY – FOUNDING PRINCIPLES

<b>Established in 1957</b>	<b>Inventor ownership of intellectual property</b>	<b>Co-operative Education</b>
Created by business leaders to address industry needs	Incentive to attract leading entrepreneurial researchers	Largest post-secondary work integrated learning program in the world

»» In just half a century, the University of Waterloo, located in the heart of Canada's technology hub, has become one of Canada's leading comprehensive universities with 35 000 full- and part-time students in undergraduate and graduate programs.

## HISTORY – FOUNDING PRINCIPLES

International recognition	Strengths (following QS subject rankings):
<p>Global rankings in the 'Big 3':</p> <ul style="list-style-type: none"><li>• QS – 152nd in the world</li><li>• ARWU – 201-300</li><li>• THE – 173rd</li></ul>	<p>Hospitality and Leisure Management Studies – 13<sup>th</sup></p> <p>Computer science – 31<sup>st</sup></p> <p>Mathematics – 34<sup>th</sup></p> <p>Top 100: Architecture, Chemical Engineering, Civil &amp; Structural Engineering, Development Studies, Electrical Engineering, Environmental Sciences, Geography, Material Sciences, Psychology, Sports Related Subjects, Statistics and Operational Research</p>

# STRATEGIC PLAN 2013-2018

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**ROBUST  
EMPLOYER-EMPLOYEE  
RELATIONSHIP**



**EXPERIENTIAL  
EDUCATION**



**SOUND VALUE  
SYSTEM**



**TRANSFORMATIONAL  
RESEARCH**



**OUTSTANDING  
ACADEMIC  
PROGRAMMING**



**UNIQUELY  
ENTREPRENEURIAL**



**VIBRANT  
STUDENT  
EXPERIENCE**



**GLOBAL PROMINENCE  
AND  
INTERNATIONALIZATION**

# STRATEGIC PLAN 2013-2018

**Goal:** increase the global impact and recognition of Waterloo research

**Objectives:**

- support research excellence and innovation;
- lead in new/emerging research areas; and
- Increase interdisciplinary and transdisciplinary research globally.



TRANSFORMATIONAL  
RESEARCH

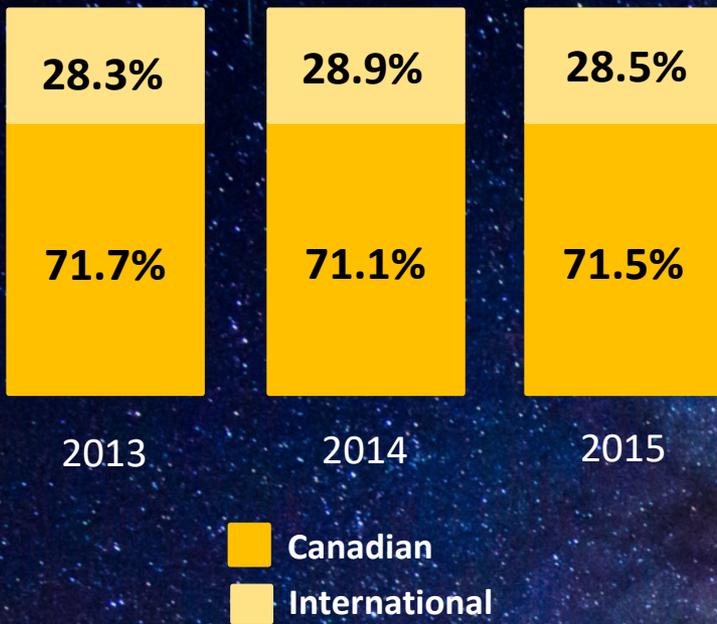
**Goal:** Become one of the most internationalized universities in Canada

**Objective:** excellence and innovation in education, research and scholarship

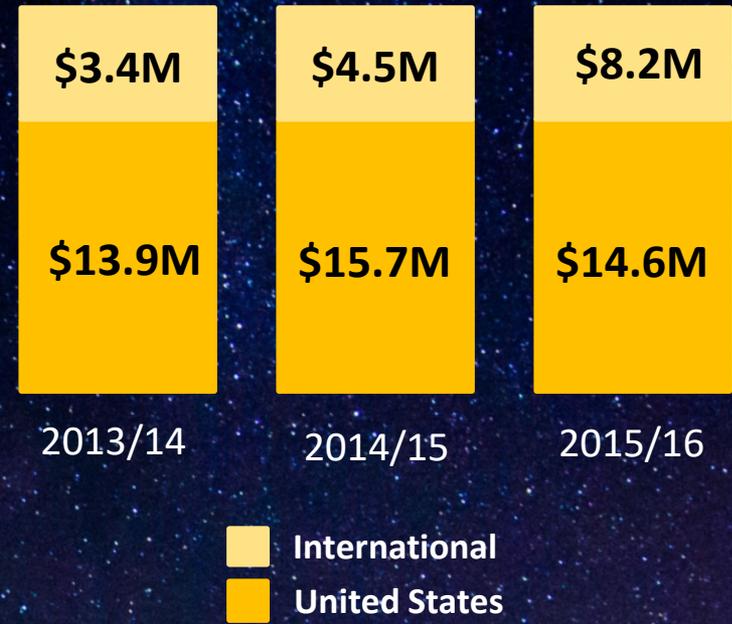
**Key actions:** diversify funding; expand international partnerships to build exemplary global research networks with elite institutions



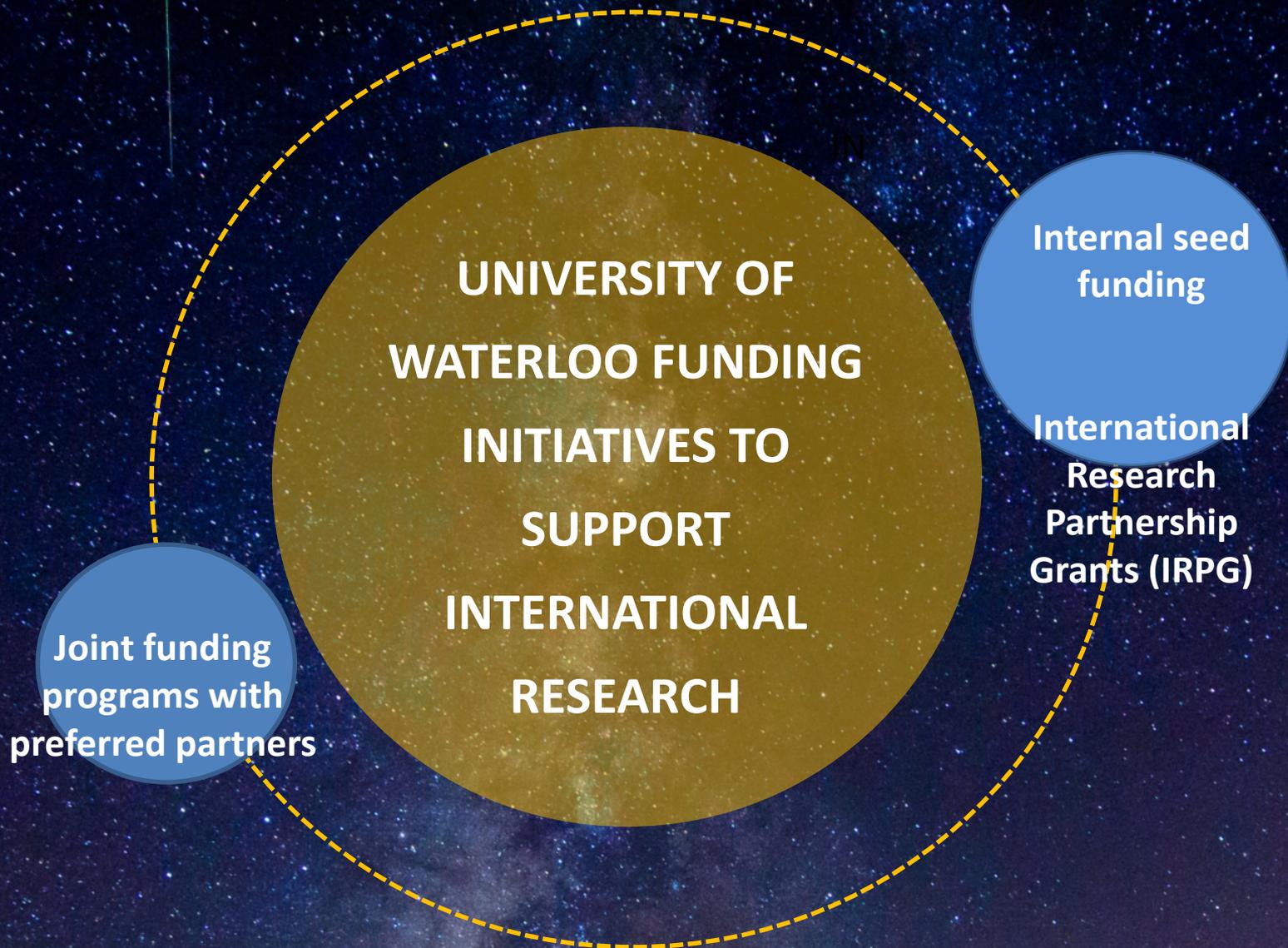
GLOBAL PROMINENCE  
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Between 2013 and 2015, about three in ten (28.5%) of our full-time faculty had an international citizenship



In 2015/16, Waterloo secured almost \$20 million in international research funding



# IRPG AND IRPG EU- OVERVIEW

The **IRPG** is an internal award administered by the IRP team. Created in 2011, the IRPG was born out of a need to provide Waterloo researchers with incentives to develop new international research collaborations with institutions known for high quality research and to leverage substantive funding opportunities.

The Office of Research is piloting an **IRPG European Union** program to support partnerships with researchers/ institutions in the European Union.

» Establish global networks

» Advance research and innovation

» Leverage new funding opportunities

## IRPG AND IRPG EU- OVERVIEW

- **Eligible expenses** - Funding is primarily for travel expenses, costs associated with partnership-building activities (workshops, conferences), and/or development of proposals for international research.
- **Funding** - the Office of the V.P. University Research will cover 50% of the costs up to \$20,000. The remaining 50% must be cash from another source(s). Although internal cash leveraging is permitted, preference is given to external sources.
- **Deadlines** - open
- **Application package**
  - a) Application form for both the IRPG and IRPG EU is available on our website: [www.uwaterloo.ca/research/IRPG](http://www.uwaterloo.ca/research/IRPG)
  - b) Support letters for matching funds
  - c) CVs for each of the principle applicants
  - d) Signed Cover Sheet for Sponsored Research

# IRPG AND IRPG EU

- **Evaluation** - Applications will be evaluated by a Waterloo Selection Committee, chaired by Vice-President, University Research. Criteria:
  - Contribution to the advancement of knowledge (quality and scientific interest of the research/project);
  - Quality and significance of the partnership (global or other rankings, areas of strategic mutual interest);
  - Quality and significance of the team (expertise, complementarity);
  - Possible outcomes of the research and collaboration (scientific advances, technology development, policy formulation, scholarship; dissemination; others); and
  - Execution of research/project (activities plan, milestones, budget).

# GRANT ACHIEVEMENTS

**\$860,000**

PROVIDED BY THE PROVOST FOR  
THE IRPG PROGRAM

LEVERAGED  
MATCHING CASH  
CONTRIBUTIONS  
TOTAL OVER

\$1.3  
MILLION

## GRANT ACHIEVEMENTS

GRANTS AWARDED  
TO UWATERLOO AS A RESULT  
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TOTALS OVER

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NATIONAL AND  
INTERNATIONAL  
CONFERENCES AND  
WORKSHOPS ATTENDED  
AND ORGANIZED

# CASE STUDY: WATERLOO INSTITUTE FOR NANOTECHNOLOGY (WIN)

## Using the IRPG to build international partnerships, collaborations and exchanges

» WIN has collaborations with  
**18 institutes in 9 countries**



**United Kingdom**  
University of Cambridge  
University of Bristol



**Poland**  
MISMap College of The  
University of Warsaw



**France**  
University of Bordeaux



**Brazil**  
National Center for Research in  
Energy and Materials (CNPEM)



**Israel**  
Technion-Israel Institute  
of Technology



**India**  
India Institute of Technology (IITB)  
Indian Institute of Science (IISc)  
Jawaharlal Nehru Centre for Advanced  
Scientific Research (JNCASR)



**China**  
Soochow University (SUN)  
Suzhou Industrial Park (SIP)



**Japan**  
National Institute for Materials  
Science (NIMS)



**Taiwan**  
Academia Sinica (AS)  
National Taiwan University (NTU)  
National Tsing Hua University (NTHU)  
National Chiao Tung University (NCTU)  
National Cheng Kung University (NCKU)  
National Program on Nanotechnology (NPNT)



# CHINA: SOOCHOW UNIVERSITY

## SUN-WIN-SIP Joint Institute

Vision: To be a global leader (Canada-China leader) in collaborative nanotechnology research, education and innovation setting a new standard for international cooperation, partnership and commercialization

### Joint Research Programs

- » **24 publications and 1 patent** have resulted
- » 12 projects funded in 2012
- » 7 projects funded in 2013
- » 5 projects funded in 2015

### Collaborative Educational Programs

- » **3+1+1**
- » 23 students enrolled in 3+1+1 BSc/MSc program since 2012; 5 to start in 2016
- » 9 publications and 1 patent from 2012 and 2013 cohorts
- » **2+2**
- » 1 co-tutelle PhD student since 2015
- » 1 to start in 2016
- » **4-month research internship**
- » 7 students participated since 2013
- » 10 students to start in 2016

### Entrepreneurship & Business Skills Development Centre

- » One startup company currently located in Nanopolis
- » One spin-off planned to locate in Nanopolis



# FRANCE

## IDS-FunMat Cotutelle PhD Program

**14** IDS-FunMat scholarships  
for cotutelle PhD students at UW/UB;  
**4** students at other consortium  
Universities



Consortium partners of 9 international universities



Funding for PhD students from EU Erasmus Mundus, Local Funds (eg. Aquitaine) and Industry (Rhodia)

# FOOD FOR THOUGHT

**Key Drivers to facilitate global networks, leverage new funding and advance research and innovation:**

- Striving to be the best necessitates partnering with the best;
- Market key established research capacities (flagship research centres; strategic research priorities);
- Provide flexibility in eligible expenses for seed programs;
- Cost sharing reinforces partnership building;
- Encourage spin-off opportunities ( new research domains, tech development, commercialization, patents);
- Diversify funding options ( leverage other funding via partnerships; unsolicited proposals);
- Intensify collaboration with preferred partners (additional seed funding required); and
- Build global research centres of excellence networks.

**OPEN DISCUSSION:** What are your best practices to facilitate global networks, leverage new funding and advance research and innovation?

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